

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1-12. (Cancelled)

13. (Currently Amended) A method of cleaning a substrate of a liquid crystal display panel comprising:

first step, moving the substrate between first and second cylindrical brushes, wherein the substrate includes including four first to fourth side surfaces and upper and lower surfaces continuously in a linear direction;

second step, ~~individually brushing two opposing~~ the first and second side surfaces opposite to each other among the [[four]] first to fourth side surfaces of the substrate parallel to the linear direction of the substrate with [[two]] the first and second cylindrical brushes, respectively, wherein the first and second cylindrical brushes are rotated to brush the first and second side surfaces, respectively, to a lower direction or to an upper direction perpendicular to a progress direction of the substrate that rotate based on an axis of rotation, wherein the axis of rotation is substantially parallel to the movement direction of the substrate and the cylindrical brushes are rotated to a direction perpendicular to the movement direction of the substrate;

third step, moving the substrate between upper and lower brushes;

fourth step, cleaning the upper and lower surfaces of the substrate with the upper and lower brushes, respectively, rotation directions of the upper and lower brushes having the same direction as a progress direction of the substrate at all contact points between the upper and lower brushes and the substrate; [[and]]

~~fourth step, individually~~ fifth step, moving the substrate between first and second jetting devices; and

sixth step, jetting deionized water that carries ultrasonic waves with a pair of the first and second jetting devices onto the two opposite first and second side surfaces of the substrate;

~~wherein cleaning upper and lower surfaces of the substrate, and brushing the side surface of the substrate are simultaneously performed while the substrate is moving continuously in the linear direction, and~~

~~wherein the jettings of the jetting devices are respectively performed onto the two opposite side surfaces of the substrate that the brushings of the two opposite side surfaces are performed, after the brushings,~~

~~wherein the substrate has a thickness of about 0.7mm.~~

14-15. (Cancelled)

16. (Currently Amended) The method of claim 13, wherein cleaning the upper and lower surfaces of the substrate comprises:

rotating to clean the upper and lower surfaces of the substrate, respectively, along the same direction as a progress direction of the substrate~~cleaning brushes on the upper and lower surface of substrate.~~

17. (Cancelled)

18. (Currently Amended) The method of claim 16, wherein the cleaning upper and lower brushes are arranged at the upper and lower surfaces of the substrate, respectively.

19-33. (Cancelled)

34. (Currently Amended) The method of claim ~~[[28]]~~ 13, wherein the ~~at least two opposing~~ first and second side surfaces are substantially parallel.

35. (Currently Amended) The method of claim ~~[[28]]~~ 13, wherein ~~[[the]]~~ an axis of rotation of each of the first and second cylindrical brushes is substantially parallel to ~~the linear a~~ progress direction of the substrate ~~movement~~.

36-44. (Cancelled)

45. (Currently Amended) A method of cleaning a substrate ~~having~~ including ~~[[four]]~~ first to fourth side surfaces and upper and lower surfaces, the method comprising:

~~moving first and second opposing side surfaces among the four side surfaces~~ the substrate between first and second side brushes to contact the first and second ~~opposing~~ side surfaces opposite to each other among the first to fourth side surfaces of the substrate ~~with the first and second side brushes;~~

rotating the first and second side brushes to brush the first and second side surfaces, respectively, to a lower direction or to an upper direction perpendicular to a progress direction of the substrate, ~~by rotation direction perpendicular to the moving direction of the substrate to~~ firstly clean ~~thereby firstly cleaning~~ the first and second ~~opposing~~ side surfaces;

continuously moving the ~~upper and lower surfaces~~ substrate between upper and lower brushes to contact the upper and lower surfaces of the substrate ~~with the upper and lower brushes;~~

rotating the upper and lower brushes to clean the upper and lower surfaces, rotation directions of the upper and lower brushes having the same direction as a progress direction of the substrate at all contact points between the upper and lower brushes and the substrate;

continuously moving the substrate ~~first and second opposing side surfaces~~ between first and second jetting devices; and

jetting deionized water that carries ultrasonic waves onto the first and second ~~opposing~~ side surfaces of the substrate to secondly clean the first and second ~~opposing~~ side surfaces of the substrate.